Facts and Filters

Water Softeners

Water dissolves rocks and minerals, releasing calcium and magnesium ions that cause water to be "hard". Water softeners will remove nearly all these ions from the water. They typically treat all of the water coming into the home.

Hardness of Water

Water Classification	Hardness in mg/L or ppm	Hardness in grains per gallon
Soft	0-17	0-1.0
Slightly hard	17-60	1.0-3.5
Moderately hard	60-120	3.5-7.0
Hard	120-180	7.0-10.5
Very hard*	180 and over	10.5 and over

Most people don't need a water softener unless their water is very hard.

1 grain per gallon = 17.1 mg/L hardness

Hard water can be a real pain, but it is not a health issue. Water softening is popular because most people prefer softened water for bathing, cleaning and washing. In addition to leaving chalky deposits on faucets and other fixtures, hard water interferes with many household-cleaning tasks (laundry, dishwashing, etc.). While household

▶ Properly maintaining equipment is essential because inadequately maintained filters can actually reduce water quality.

▶ All filtering systems are different. It's important to make sure the device you choose addresses your particular concern.

▶ If you're concerned about lead or other contaminants, you should have water tested at the tap.

▶ Questions regarding specific devices, as well as specific guidelines for maintenance, should be directed to the manufacturer.

▶ Our water supply meets all state and federal water quality standards [Note: Remove if this is not true]. Questions about water quality should be directed to {insert utility customer service number}

▶ Individuals with specific concerns about medical conditions should discuss options with their doctor.

Presented in cooperation with

American Water Works Association

Place Logo Here

appliances, including water heaters, may be adversely affected by hard water. (see the hardness table above), problems can be easily avoided by proper maintenance and cleaning. For example, draining some water from hot water tanks removes deposits.

Water can be softened by a process called ion exchange. Sodium (or potassium) ions are used to coat an exchange medium in the softener. As hard water passes through the unit, the water "trades" its calcium and magnesium for the sodium or potassium.

Water softeners are classified in five different categories: manual, semi-automatic, automatic, demand-initiated regeneration (DIR), and off-site regeneration. In terms of efficiency, DIR units are considered desirable because they regenerate only after a certain volume of water has been processed.

Retail prices for home water softeners may range from a few hundred to several thousand dollars, depending on the size and type of softener. The cost of salt to replenish the brine solution is approximately $5 to $7 per month, depending on the form purchased.

Advantages of water softeners include improved "feel" on skin when bathing (subjective); cleaner, softer clothes; longer life of some appliances; reduced use of household cleaning products; and reduction of water spots and deposits. Disadvantages of water softeners include increased sodium which may concern some people on restrictive diets (check with your doctor about this issue); harm to houseplants because of elevated salt content; and overload or reduced effectiveness of septic systems.

There are several alternatives to reduce problems associated with hard water. They include laundry detergents that contain water-softening agents; dishwasher rinse aids; bath salts; and lime- or mineral-dissolving household cleaners. Deposits on fixtures and countertops can be prevented by wiping surfaces dry; mineral residue on surfaces only occurs when water is allowed to evaporate.

Other technologies, called water "conditioners," are marketed as salt-free alternatives to softeners. Consumers must decide individually on the validity of these claims. It should be noted that neither the American Water Works Association nor the Water Quality Association endorses these technologies.

Place
Logo
Here